THE UNIVERSITY OF TEXAS AT AUSTIN

RECOMMENDATION FOR CHANGE IN ACADEMIC RANK/STATUS

Name: Nikolova, Evdokia   EID: en4762   Present Rank: Assistant Professor

Years of Academic Service (*Include AY 2018-19 in each count*):

At UT Austin since: 1/1/2014 (month/day/year) Total Years at UT Austin: 5.5

In Present Rank since: 1/1/2014 (month/day/year) Total Years in Present Rank: 5.5

Tenure-track only:
Number of Years in Probationary Status: 4

Additional information: Accelerated; Probationary Extension 2015-16

Primary Department: Electrical and Computer Engineering

College/School: Engineering, Cockrell School of

Joint Department: N/A

College/School: N/A

Other Department(s): N/A

Recommendation actions[1]:

By Budget Council/Executive Committee: Promote

Vote[2] for promotion 32; Against 1; Abstain 2; Absent 0 ; Ineligible to vote 2

By Department Chair: Promote

By College/School Advisory Committee: Promote

Vote[2] for promotion 7 ; Against 0 ; Abstain 0 ; Absent 0   ; Ineligible to vote 0

By Dean: Do Not Promote

Administrative Action:

Date Action Effective: September 1, 2019
(To be submitted to the Board of Regents as part of the annual budget.)

By: Date:

For the President

[1]See "Chart of Recommended Actions" for eligible recommended doctions applicable to specific conditions and administrative levels.
[2]Record all votes for and against promotion, abstentions by eligible voting members, and the number of absent eligible voting members. The number of committee members ineligible to vote should also be recorded. Enter zero where it would otherwise be blank.

EVPP/4.15

The University of Texas at Austin
Cockrell School of Engineering

Dean's Assessment
Evdokia V. Nikolova
Department of Electrical and Computer Engineering
Cockrell School of Engineering

Dr. Evdokia Nikolova received her BA in applied mathematics with economics from Harvard University in 2002, an MS in computer science from Harvard in 2002, an MS in mathematics from Cambridge University in 2003, and a PhD in electrical engineering and computer science from the Massachusetts Institute of Technology in 2009. She was a post-doc at MIT for two years before joining the faculty in the Department of Computer Science and Engineering at Texas A&M University in September 2011.

In January 2014, she joined the faculty in the Department of Electrical and Computer Engineering (ECE) at UT Austin as an assistant professor. If promoted to associate professor in September 2019, she will have accumulated four years of probationary service at UT Austin. However, Dr. Nikolova will have served a total of eight years in rank as an assistant professor (2.5 years at Texas A&M and 5.5 years at UT Austin). The budget council in the Department of Electrical and Computer Engineering felt that her total time in rank was sufficient to warrant consideration for promotion this year. The Cockrell School's promotion and tenure committee agreed with this assessment.

2011-12	Texas A&M	
2012-13	Texas A&M	
2013-14	Texas A&M	UT Austin
2014-15	UT Austin	
2015-16	Simons Institute (UC Berkeley)	Modified Instructional Duties
2016-17	UT Austin	
2017-18	UT Austin	

Dr. Nikolova's research is at the intersection of operations research, theoretical computer science, and computer engineering. Her recent work has led to refinement of network routing algorithms to include uncertainty and risk aversion, with application to transportation networks and smart grids. Her work is directly related to one of the Cockrell School's crosscutting themes: modeling and simulation of complex systems and networks.

Nine external letters were submitted as part of the promotion dossier, with five letter writers selected by the budget council. All letter writers are current or former faculty members at peer universities in the US. One reviewer is a member of the National Academy of Engineering (NAE). One additional letter was requested, but the individual did not respond.

Teaching
While in rank, Dr. Nikolova taught one core undergraduate course and two graduate electives. During her first three semesters teaching, Dr. Nikolova's instructor ratings were 4.1 and 4.3 at the graduate level and 4.0 at the undergraduate level. These are quite strong for a new assistant professor, and indicated that she has the ability to engage her students in the classroom.

Dr. Nikolova did not teach during the 2015-16 academic year,[1] and since then her instructor ratings have fallen. In her three most recent courses, her instructor ratings have ranged from 3.7 to 3.9.[2] Dr. Nikolova attributed her reduced scores to the quality of her teaching assistants. Of particular note, Dr. Nikolova indicated that the teaching assistants are responsible for "creating and grading the homework and programming assignments." Dr. Nikolova's statement contradicts the philosophy within the Cockrell School that the faculty member is responsible for all aspects of the course, and critical aspects, such as developing assignments, should not be delegated to teaching assistants.

In their comments, the students did complain about grading of the programming assignments, but they also provided extensive comments about how the classes could be improved. One undergraduate student even provided a comprehensive recommendation for revising the syllabus for EE 360C. Dr. Nikolova did not address these comments in her teaching statement.

Research
Key metrics documenting Dr. Nikolova's publication and external funding record are summarized below:

- 12 peer-reviewed proceedings at conferences in rank at UT (6 in rank at Texas A&M, 30 total).[3] She published 10 conference papers with her students/post-docs at UT.
- 3 archival journal publications in rank at UT (4 total). She published one journal paper with her post-docs at UT.
- She has published papers in highly selective conferences related to algorithmic game theory and artificial intelligence, including ACM Conference on Economics and Computation (ACM EC) and International Joint Conference on Artificial Intelligence (IJCAI).
- She also published in high impact journals related to operations research, most notably *Operations Research* (IF=2.26).
- An h-index of 17 (Google Scholar) and 994 citations.[4]

While in rank at UT Austin, Dr. Nikolova secured two research grants totaling $1.2 million in external funding (her share is $0.9 million) from the National Science Foundation (NSF). As an assistant professor at Texas A&M, Dr. Nikolova secured three research grants ($1.4 million total, $0.7 million her share) from NSF and industry.

Dr. Nikolova is the sole PI on two grants from NSF and a Faculty Research Award from Google. Both of the other two awards from NSF include multiple investigators. Dr. Nikolova is the PI on one, and co-PI on the other. One of her current awards from NSF extends beyond the end of the 2018-19 academic year.

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[1] She participated in the Economics and Computation workshop at the Simons Institute for the Theory of Computing at UC Berkeley during the 2015 fall semester, and was scheduled to teach two classes in the 2016 spring semester. However, she became pregnant during the 2015 fall semester and was assigned modified instructional duties during the 2016 spring semester.

[2] 16.5% of the instructor ratings for T/TT faculty in the Cockrell School are 3.7 or below.

[3] Refereed conference papers in highly selective conferences are the primary mechanism for disseminating research results in the field of computer science.

[4] Dr. Nikolova's most highly cited paper has 132 citations and is based on work completed during her graduate studies at MIT. Her most highly cited paper based on work conducted at UT Austin has 42 citations.

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While Dr. Nikolova's external funding has come from highly competitive sources, approximately 70% of her funding was awarded during her first three years in rank. Only one grant has been awarded in the past four academic years. This raises questions about the sustainability of her research funding.

The letters from the external reviewers were uniformly positive and addressed technical quality of Dr. Nikolova's work, which is described as being rigorous and mathematically sound. Several referred to her leadership role in organizing the Real-Time Decision Making workshop at the Simons Institute for the Theory of Computing at UC Berkeley during the 2018 spring semester.

Advising and Student Mentoring
Dr. Nikolova graduated one PhD in rank at UT Austin[5] and she mentored one postdoctoral fellow. She is currently advising six PhD students (two are co-supervised) and one postdoctoral fellow.

University Service
Dr. Nikolova's service to the university has primarily been related to faculty recruiting and graduate student recruiting.

Professional Service
Dr. Nikolova was one of five organizers for the semester-long workshop on real-time decision making at the Simons Institute for the Theory of Computing at UC Berkeley during the 2018 spring semester.[6] She also was the lead organizer for a week-long program, "Mathematical and Computational Challenges in Real-Time Decision Making," which was part of the workshop.

Dr. Nikolova has also served on thirteen technical program committees for conferences in algorithmic game theory, theoretical computer science, and artificial intelligence.

Other Evidence of Merit or Recognition
Dr. Nikolova received a CAREER award from the National Science Foundation in 2014 and a Faculty Research Award from Google in 2013.[7] She and a graduate student were recognized with a best paper award at the IEEE International Conference on Acoustics, Speech and Signal Processing in 2018.

Overall Assessment
Dr. Nikolova has a strong publication record, she has received two prestigious awards, and she is actively engaged with the Simons Institute for the Theory of Computing at UC Berkeley.[8] However, her teaching record is modest and the budget council expressed concerns about her relatively weak engagement in the department.

As noted previously, the Promotion and Tenure committee strongly supported Dr. Nikolova's case. They noted the uniform support for her innovative research, and felt that her teaching was a minor concern.

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[5] She did not graduate any PhD or MS students at Texas A&M.
[6] The other four organizers were tenured faculty members at Caltech, Stanford, and UC Berkeley.
[7] Approximately 15% of the proposals are funded by Google.
[8] As noted on their website, "The Simons Institute for the Theory of Computing is the world's leading venue for collaborative research in theoretical computer science."

If this were an up-or-out case, I would likely agree with the recommendation of the Promotion and Tenure committee. However, Dr. Nikolova is being considered for promotion at UT Austin two years early. I do not believe that she has taken responsibility for improving her teaching, and I have concerns about the sustainability of her research program. These concerns are compounded by the fact that both her teaching and her external funding have dropped since she spent the 2015 fall semester at UC Berkeley.

As such, I do not believe that Dr. Nikolova's performance meets expectations for early promotion to associate professor.

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Sharon L. Wood, Dean
20 November 2018

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